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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

RICOH COMPANY, LTD.,

Plaintiff,

vs.

AEROFLEX INCORPORATED, et al.,

Defendants

SYNOPSIS, INC.,

Plaintiff,

vs.

RICOH COMPANY, LTD.,

Defendant.

CASE NO. C-03-4669-MJJ (EMC)
CASE NO. C-03-02289 MJJ (EMC)

**RICOH'S OPPOSITION TO DEFENDANTS'
MOTION FOR SUMMARY JUDGMENT OF
UNENFORCEABILITY DUE TO
INEQUITABLE CONDUCT [MOTION NO. 5]
(NOS. 419 and 565)**

Date: September 26, 2006
Time: 9:30 a.m.
Courtroom: 11, 19th Floor
Judge: Martin J. Jenkins

RICOH'S OPPOSITION TO DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF UNENFORCEABILITY DUE TO INEQUITABLE
CONDUCT [NO. 5] (NOS. 419 & 565)

CASE NOS. CV-03-4669-MJJ (EMC) & CV-03-02289 MJJ (EMC)

TABLE OF CONTENTS

	<u>Page No.</u>
I. INTRODUCTION	3
II. RICOH'S COUNTERSTATEMENT OF FACTS	2
A. PROSECUTION HISTORY OF THE '432 PATENT APPLICATION.....	2
B. THE PATENT REEXAMINATION.....	3
C. THE 1989 ARTICLE "KBSC: A KNOWLEDGE BASED APPROACH TO AUTOMATIC LOGIC SYNTHESIS".....	4
III. LEGAL STANDARDS	6
A. STANDARDS FOR SUMMARY JUDGMENT	6
B. STANDARDS FOR INEQUITABLE CONDUCT.....	8
IV. ARGUMENT.....	9
A. DEFENDANTS HAVE NOT SATISFIED THEIR BURDEN OF SHOWING THAT THE KOWALSKI 85 ARTICLE REFERENCE IS MATERIAL.	9
1. The Kowalski 86 article has not shown by clear and convincing evidence to be material	10
2. The Kowalski 85 article is not shown by clear and convincing evidence to be material	10
B. DEFENDANTS HAVE NOT SATISFIED THEIR BURDEN OF SHOWING THAT INTENT TO DECEIVE.....	14
V. DEFENDANTS UNSUPPORTED INNUENDO SHOULD BE DISREGARDED.....	15
VI. CONCLUSION.....	16

TABLE OF AUTHORITIES

Page(s)

<i>ATD Corp. v. Lydall, Inc.</i> , 159 F.3d 534 (Fed. Cir. 1998).....	7
<i>Amhil Enterprises Ltd. v. Wawa, Inc.</i> , 81 F.3d 1554 (Fed. Cir. 1996)	7
<i>Amini Innovation Corp. v. Anthony California, Inc.</i> , 439 F.3d 1365 (Fed. Cir. 2006).....	7
<i>Anderson v. Liberty Lobby, Inc.</i> , 477 U.S. 242 (1986)	5, 6, 7
<i>Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.</i> , 796 F.2d 443 (Fed. Cir. 1986)	
.....	8
<i>Burlington Ind., Inc. v. Dayco Corp.</i> , 849 F.2d 1418 (Fed. Cir. 1988)	7
<i>Constant v. Advanced Micro-Devices, Inc.</i> , 848 F.2d 1560 (Fed. Cir. 1988).....	3
<i>Continental Can Co. v. Monsanto Co.</i> , 948 F.2d 1264 (Fed. Cir. 1991).....	6
<i>D.M.I., Inc. v. Deere & Co.</i> , 755 F.2d 1570 (Fed. Cir. 1985).....	7
<i>GFI, Inc. v. Franklin Corp.</i> , 265 F.3d 1268 (Fed. Cir. 2001).....	7
<i>Halliburton Co. v. Schlumberger Technology Corp.</i> , 925 F.2d 1435 (Fed. Cir. 1991).....	8
<i>Helifix Ltd. v. Blok-Lok, Ltd.</i> , 208 F.3d 1339 (Fed. Cir. 2000).....	7
<i>Hilgraeve Corp. v. McAfee Associates</i> , 224 F.3d 1349 (Fed. Cir. 2000)	6
<i>Hodosh v. Block Drug Co.</i> , 786 F.2d 1136 (Fed. Cir. 1986)	6
<i>Juicy Whip, Inc. v. Orange Bang Inc.</i> , 292 F.3d 728 (Fed. Cir. 2002)	8
<i>MEMC Electric Materials, Inc. v. Mitsubishi Materials Silicon Corp.</i> ,	
2006 U.S.Dist. LEXIS 9353, *20 (N.D. Cal. Feb. 24, 2006)	6
<i>In Re Mashall W. Cronyn</i> , 890 F.2d 1158 (Fed. Cir. 1989).....	3
<i>Monsanto v. Bayer Bioscience</i> , 363 F.3d 1235 (Fed. Cir. 2004).....	8
<i>Scosche Industrial v. Visor Gear</i> , 121 F.3d 675 (Fed. Cir. 1997)	6

FEDERAL STATUTES

35 U.S.C. § 102.....	3
37 C.F.R. § 1.56	8
Fed. R. Civ. P. 56.....	6

I. INTRODUCTION

RICOH'S OPPOSITION TO DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF UNENFORCEABILITY DUE TO INEQUITABLE CONDUCT [NO. 5] (NOS. 419 & 565)

CASE NOS. CV-03-4669-MJJ (EMC) & CV-03-02289 MJJ (EMC) Page iii

1 This particular motion for summary judgment is predicated on the assertion by the Aeroflex
 2 defendants and Synopsys (collectively “Defendants”) that one of the named inventors intentionally
 3 withheld material prior art from the U.S. Patent and Trademark Office (“PTO”) during the examination
 4 of the patent application that led to the ‘432 Patent in suit. Defendants’ argument is predicated on their
 5 allegation that Dr. Kobayashi was aware of a particular 1985 article of Kowalski (“Kowalski 85”).
 6 Defendants assume that Kowalski 85 is material because, they claim, when the PTO recently agreed to
 7 reexamine the ‘432 Patent, the PTO allegedly stated that claim 13 is unpatentable over Kowalski 85.
 8 Defendants’ theory is a house of cards constructed on a foundation of sand, for four reasons:

9 First, the PTO has not concluded that claim 13 is unpatentable, nor has it said that there is a
 10 reasonable question of patentability of claim 13 over Kowalski 85 itself. Second, while Defendants
 11 argue that Dr. Kobayashi *may* have known of the existence of a 1986 article by Kowalski, they have
 12 presented *no evidence whatsoever* that Dr. Kobayashi knew of Kowalski 85 upon which they predicate
 13 their argument. Third, Defendants have presented no evidence that Dr. Kobayashi knew of the
 14 materiality of Kowalski 85. And fourth, Defendants have failed to present admissible evidence that
 15 Kowalski 85 itself was material and that it was more relevant to claim 13 than all of the other prior art
 16 before the PTO during the patent prosecution.

17 Inequitable conduct must be proven by clear and convincing evidence. For summary judgment,
 18 Defendants must show that there are no genuine issues of material fact relating to their ability to carry
 19 their burden. Because Defendants can do neither, the motion should be denied.

20 **II. RICOH’S COUNTERSTATEMENT OF FACTS**

21 **A. Prosecution history of the ‘432 patent application**

22 The Applicants filed the patent application for the ‘432 patent on January 13, 1988. (Brothers
 23 Dec. Ex. 39, Prosecution History at RCL 1-265)¹. On January 18, 1989, a non-Final Office Action
 24 issued. (*Id.* at RCL 00082-84). On April 18, 1989, Applicants filed an Amendment in response to the
 25 Office Action. (*Id.* at RCL 207-223).

26
 27 ¹ Ricoh’s exhibits to all of their oppositions to the numerous motions for summary judgment are attached to the
 28 September 1, 2006 declaration of Kenneth W. Brothers

Applicants filed two Information Disclosure Statements (“IDS’s”) during the prosecution of the ‘432 patent. (*Id.* at RCL 65, 187). The first IDS was filed by Applicants on January 13, 1988, contemporaneously with the filing of the patent application. The IDS included four references; three of the references were “U.S. patent documents” (provided pursuant to rule 60) and the fourth reference was “Other Prior Art.” (*Id.* at RCL 65) On April 18, 1989, Applicants filed a second IDS citing additional references. (*Id.* at RCL 187). This IDS included two “Other Documents:” “Flamel: A High Level Hardware Compiler” by Trickey (“Trickey”) and “The CMU Design Automation System – An Example of Automated Data Path Design” by Parker et al. (“Parker”). One of the references—Trickey—includes a discussion of several different hardware compilers, including CMU-DA; Flamel; Design Automation Assistant (“DAA”); and The VLSI Design Automation Assistant (“VDAA”). The Applicants’ contemporaneously filed Amendment commented on several of the systems cited in the Trickey article, thus drawing the Examiner’s attention to the Trickey reference. (*Id.* at RCL 218).

In addition, the Patent Office cited several additional references during the prosecution of the ‘432 patent. On January 18, 1989, along with the mailing of an Office Action, the Office filed two “Notices of References Cited” (a “PTO-892”). (*Id.* at RCL85, 121). The two PTO-892s listed several references including “A New Look at Logic Synthesis” by Darringer et al.; “Methods used in an Automatic Logic Design Generator (ALERT)” by Friedman et al; “Quality of Designs from an Automatic Logic Design Generator” by Friedman et al; and “An Overview of Logic Synthesis Systems” by L. Trevillyan (“Trevillyan”). (*Id.*) On August 15, 1989, along with the mailing of an Office Action, the Office filed another PTO-892 with still another reference. (*Id.* at RCL 227). Thus, the PTO had a large number of references before it, including those provided by the Applicants and those cited by the PTO.

B. The Patent Reexamination

A reexamination of the ‘432 patent was anonymously requested earlier this year.² The grant of

² Ricoh believes that Synopsys and/or Defendants instigated this reexamination request as well as a second, separate request for reexamination of the ‘432 patent. The attorney who filed the requests implicitly confirmed this, then later denied having provided a confirmation, but Synopsys and Defendants have not denied it.

the reexamination request (Brothers Dec. Ex. 85, hereinafter the “Grant”) refers to two Kowalski publications applied together in combination as the basis for the reexamination: “The VLSI Design Automation Assistant: A Knowledge Based Expert System”, by Kowalski et al. (“Kowalski 84 Thesis”) (Brothers Dec. Ex. 82)³ and “The VLSI Design Automation Assistant: From Algorithms to Silicon”, by Kowalski et al. (“Kowalski 85”) (Brothers Dec. Ex. 83). As part of its analysis and justification for opening the patent for reexamination, the Grant identifies at least one claimed element (e.g., “specifying for each described action and condition”) that is compared to a reference other than Kowalski 85. ((Brothers Dec. Ex. 85, the Grant at 7). Additionally, the Grant identifies at least one claimed element (“said step of selecting a hardware cell”) that is compared to a reference other than Kowalski 85 or the Kowalski 84 Thesis. (*Id.*)⁴ Consequently, contrary to the representation of Defendants, the PTO has not held that Kowalski 85 *by itself* creates a question of patentability for claim 13.

C. The 1989 Article “KBSC: A Knowledge Based Approach to Automatic Logic Synthesis”

Dr. Kobayashi and Mr. Shindo, along with Mr. Terumi Suehiro of Ricoh, co-authored an article in 1989 that discussed the KBSC system, a knowledge based silicon compiler that was jointly developed by Ricoh and International Chip Corporation (“ICC”). (Brothers Dec. Ex. 84). This article, titled “KBSC: A Knowledge Based Approach to Automatic Logic Synthesis,” is referred herein as the “1989 co-authored article.”

³ There is a dispute as to whether the Kowalski 84 Thesis even constitutes prior art. The Kowalski Thesis has never been shown to be a published document that was “publicly accessible” prior to the invention of the ‘432 patent sufficient to be a “printed publication,” as required under 35 U.S.C. § 102. “The statutory phrase ‘printed publication’ has been interpreted to mean that before the critical date the reference must have been sufficiently accessible to the public interested in the art; dissemination and public accessibility are the keys to the legal determination whether a prior art reference was ‘published.’” *In Re Mashall W. Cronyn*, 890 F.2d 1158, 1160 (Fed. Cir. 1989) quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1568 (Fed.Cir. 1988). Defendants have proffered no admissible evidence that the Kowalski 84 Thesis met the requirements of § 102.

⁴ Ricoh has not yet responded to the initial position of the PTO and will not and need not respond unless and until it receives a first Office Action from the PTO. It is possible at that time, upon further review, the PTO will decide that the claims remain patentable and will never reject any of the claims. If there is a rejection, only then will Ricoh explain how the prior art references fail to teach the claimed invention.

1 The 1989 co-authored article includes a discussion of some of the functionality of that KBSC
 2 system. For example, the article discusses on an abstract level how different software modules of that
 3 KBSC system function, including simulation, control path and datapath synthesis. (*Id.*). The 1989 co-
 4 authored article also performs a cursory comparison between that KBSC system and several other logic
 5 synthesis systems of the time. For example, the input form of the ALERT synthesis system, which uses
 6 “architectural description in Iverson’s APL notation with declarations of variables to represent physical
 7 devices such as flip-flops and registers,” is compared to that KBSC system’s input. (*Id.* at 388-89).

8 The VLSI Design Automation Assistant⁵ is another of the systems that that KBSC system is
 9 cursorily compared to in the 1989 co-authored article. The DAA system is described as an:
 10 expert system that uses heuristic rules to synthesize architectural implementation from an
 11 algorithmic description with design constraint. Input to DAA is written in ISPS, a description
 12 for a Digital Equipment Corporation computer. DAA produces a hardware network composed of
 13 modules, ports, links, and symbolic microcode.
 14 (*Id.* at 389). The reference is cited as “T.J. Kowalski, D.J. Geiger, W.H. Wolf and W. Fichter, ‘The
 15 VLSI Design Automation Assistant: From Algorithms to Silicon,’ IEEE Design and Test of Computers
 16 Magazine, Vol. 2, No. 4, pp. 33-43, August 1986” (*Id.* at 390, emphasis added). The significance of the
 17 1986 date is hotly disputed. While Defendants allege that this date is a typographical error, Ricoh notes
 18 that another reference also before the PTO in the ‘432 Patent file history, an article by Trevillyan, also
 19 cites to the same 1986 article and indicated a date of 1986, not 1985. (Brothers Dec. Ex. 39, at RCL
 20 120).

21 **D. The Inventors’ Lack of Knowledge of the Kowalski 84 Thesis**

22 There is no evidence or support for any argument that Dr. Kobayashi (or his co-inventor,
 23 Mr. Shindo) had seen and knew of the contents of the Kowalski 84 Thesis. Defendants provide none in
 24 their papers. As set forth below, since the arguments of Defendants are predicated on Kowalski 85 and
 25 Kowalski 84 thesis taken together, the inventors’ lack of knowledge of the Kowalski 84 Thesis
 26 effectively destroys the allegations of inequitable conduct.

27 ⁵ Although the body of the article refers to “Design Automation Assistant,” the cite refers to “VLSI
 28 Design Automation Assistant.”

1 E. The Factual Disputes In the Parties' Expert Reports

2 Dr. Mitchell, one of the three technical experts for Defendants, has provided comments in his
 3 expert report comparing Kowalski 85 to the Darringer '435 patent, which was just one of the many
 4 references cited during the patent prosecution. However, Dr. Mitchell has not provided any comparison
 5 of Kowalski 85 to any of the other prior art before the PTO during the original prosecution.⁶
 6 Consequently, as set forth below, Dr. Mitchell has not shown by clear and convincing evidence that
 7 Kowalski 85 is more material than *all* of the other prior art of record, which is a fundamental
 8 requirement for inequitable conduct.

9 By contrast, Dr. Soderman, Ricoh's technical expert on prior art, *has* compared Kowalski 85 to
 10 *all* of the prior art before the PTO and has opined that Kowalski 85 is *not* more relevant and is at most
 11 cumulative to the other prior art that was already before the examiner:

12 I cannot agree with the contention in the Mitchell Report that the VDAA system as
 13 described in [Kowalski85c] would have been "material" to examination of the claims of
 14 the '432 patent. The Mitchell Report, for example, primarily relies on the fact that
 15 [Kowalski85c] disclosed a system using a high-level functional specification, which was
 16 not shown in Darringer. Although this is true, the Mitchell Report fails to recognize that
 17 other previously cited prior art references, particularly [Parker79] and [Trickey87] (as
 18 noted above) taught the very same high-level input (ISP) used in the VDAA. Indeed, the
 "architecture independent" nature of the VDAA system itself was noted in a reference
 voluntarily submitted (and formally considered by the examiner) during prosecution of
 the '432 patent. To that extent, the VDAA system as described in [Kowalski85c] was
already disclosed during prosecution of the '432 patent, or at the very least, must be
 considered merely "cumulative" to the prior art of record in the '432 patent file history.

19 (Brothers Dec. Ex. 31, Soderman Rebuttal at 51). As such, the Kowalski 85 has been reviewed and
 20 analyzed by Ricoh's expert and determined not to more material than references already before the PTO.
 21 To the extent that defendants' experts disagree, there is a genuine dispute of material fact.

22 III. LEGAL STANDARDS

23 A. Standards for Summary Judgment

24 Summary judgment is considered a drastic remedy and deprives a party of the right to a jury
 25 trial; courts, therefore, apply a strict standard of review. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242,
 26

27
 28 ⁶ Dr. Mitchell has not provided any comments about any Kowalski 1986 article.

254-5 (1986). Summary judgment may properly be granted only where no genuine issue of material fact exists or where, viewing the evidence and inferences that may be drawn therefrom in the light most favorable to the party opposing summary judgment, the movant is clearly entitled to prevail as a matter of law. Fed. R. Civ. P. 56(c), *Anderson*, 477 U.S. at 255 (“The evidence of the nonmovant is to be believed, and all justifiable inferences are to be drawn in his favor.”). There is a high standard for summary judgment motions in patent cases. Summary judgment is “to avoid a clearly unnecessary trial . . . not to substitute lawyers’ advocacy for evidence.” *Cont’l Can Co. v. Monsanto Co.*, 948 F.2d 1264 (Fed. Cir. 1991).

Summary judgment is improper when there is a conflict between expert opinions; a trial with the refining fire of cross-examination is a more effective means of arriving at a conclusion than perusal of *ex parte* declarations of experts. *Hodosh v. Block Drug Co.*, 786 F.2d 1136, 1143 (Fed. Cir. 1986); *Hilgraeve Corp. v. McAfee Assocs.*, 224 F.3d 1349, 1352-53 (Fed. Cir. 2000) (“differences in the experts’ descriptions of [the allegedly infringing program] raise a genuine issue of material fact. The record shows a genuine and material conflict over the [operation of the program] arising from the differing explanations. . . Moreover the record does not conclusively describe [the operation of the program]. . . The determination of whether either description (or neither) is correct requires a factual determination of the actual operation of the [program]”).

Summary judgment must be support by “facts as would be admissible in evidence.” *MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon Corp.*, 2006 U.S. Dist. LEXIS 9353, *20 (N.D. Cal. Feb. 24, 2006) *citing* Fed. R. Civ. P. 56(e). In deciding on a summary judgment motion, the court may take into account any material that would be admissible or usable at trial, but inadmissible evidence may not be considered. “To be acceptable at summary judgment stage, the evidence presented in the affidavit must be evidence that would be admissible if presented at trial through the testimony of the affiant as a sworn witness” *Scosche Indus. v. Visor Gear*, 121 F.3d 675, 682 (Fed. Cir. 1997) *quoting* 11 James Wm. Moore, Moore’s Federal Practice § 56.14[1][d], at 56-162 (3d ed. 1997)) (“Affidavits [that]

1 do not satisfy Rule 56(e) [] must be disregarded.”

2 A court may only grant summary judgment if no reasonable jury could agree with the non-
 3 movants’ factual contentions. *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 540 (Fed. Cir. 1998).
 4 Consequently, a district court should approach the fact issues underlying a motion for summary
 5 judgment with great care. *Amhil Enters. Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1557 (Fed. Cir. 1996). Any
 6 doubts, inferences, or issues of credibility must be resolved against the movant. *Helifix Ltd. v. Blok-Lok,*
 7 *Ltd.*, 208 F.3d 1339, 1345-6, (Fed. Cir. 2000). Additionally, evidence of the non-movant is to believed
 8 and all inferences drawn in his favor. *Anderson*, 477 U.S. at 255. Even where the movant can make a
 9 *prima facie* showing by clear and convincing evidence based on the movant’s particular interpretation of
 10 the facts, summary judgment is still improper if there are *any* genuine issues of material fact. *Helifix*,
 11 208 F.3d at 1346, 1350 (vacating district court’s summary judgment of invalidity due to genuine issues
 12 of material fact). “To overturn a summary judgment, the non-movant need only show that one or more
 13 of the facts on which the district court relied was ‘genuinely in dispute’ and was material to the
 14 judgment.” *Amini Innovation Corp. v. Anthony California, Inc.*, 439 F.3d 1365, 1368 (Fed. Cir. 2006).A
 15 "motion for summary judgment of infringement or noninfringement should be approached with a care
 16 proportioned to the likelihood of its being inappropriate". *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570,
 17 1573 (Fed. Cir. 1985).

18 **B. Standards for Inequitable Conduct**

19 “Inequitable conduct entails a two-step analysis: first, a determination of whether the withheld
 20 reference meets a threshold level of materiality and intent to mislead, and second, a weighing of the
 21 materiality and intent in light of all of the circumstances to determine whether the applicant's conduct is
 22 so culpable that the patent should be unenforceable.” *GFI, Inc. v. Franklin Corp.*, 265 F.3d 1268, 1273
 23 (Fed. Cir. 2001).⁷ Information is material if there is a “substantial likelihood that a reasonable examiner
 24
 25

26
 27 ⁷ The Federal Circuit has observed the growing trend of parties alleging inequitable conduct and that it
 28 “has become an absolute plague.” *Burlington Ind., Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988).

would consider it important in deciding whether to allow the application to issue as a patent.” *Halliburton Co. v. Schlumberger Technology Corp.*, 925 F.2d 1435, 1440 (Fed. Cir. 1991) citing 37 CFR § 1.56 (1989). “When weighing whether uncited prior art is more material than that before the examiner, a trial court considers similarities and differences between prior art and the claims of the patent. In making this determination, the trial court must consider portions of prior art references, which teach away from the claimed invention.” *Halliburton Co.*, 925 F.2d at 1441, citing *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 448-49 (Fed. Cir. 1986).

“The more material the omission, the less culpable the intent required, and vice versa.” *Halliburton Co.*, 925 F.2d at 1439. “The challenged conduct must be sufficient to require a finding of deceitful intent in light of all the circumstances.” *Juicy Whip, Inc. v. Orange Bang Inc.*, 292 F.3d 728, 744 (Fed. Cir. 2002) citing *Kingsdown Med. Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 873 (Fed. Cir. 1988) (en banc in relevant part).⁸ Because “both intent and materiality are questions of fact,” inequitable conduct is difficult to be resolved on a motion for summary judgment. *Juicy Whip, Inc.*, 292 F.3d at 744, citing *Baxter Int’l, Inc. v. McGaw, Inc.*, 149 F.3d 1321, 1327 (Fed. Cir. 1998).

IV. ARGUMENT

A. Defendants Have Not Satisfied Their Burden Of Showing That The Kowalski 85 Article Reference Is Material.

Defendants have not shown by clear and convincing evidence that the Kowalski 86 article referred to in the 1989 co-authored article is material. To begin with, Defendants have not shown by clear and convincing evidence that the Kowalski 86 reference in the 1989 co-authored article is the same article as Kowalski 85. Nor can Defendants show by clear and convincing evidence that the Kowalski

⁸ The *Monsanto* and *Bruno* cases cited by Defendants, are misconstrued by Defendants, and are not applicable to the current facts. Those cases regard affirmative acts of the Applicants that were misleading. *Monsanto* refers to a affiant who took an affirmative action and prepared a seemingly false declaration to the PTO during prosecution, a declaration that was critical to the allowance of the patent application. In order to overcome this, *Monsanto* indicates that “the affiant who seeks to avoid summary judgment ‘must at least state facts supporting a plausible justification or excuse for the misrepresentation.’” *Monsanto v. Bayer Bioscience*, 363 F.3d 1235, 1241 (Fed. Cir. 2004)(emphasis added). This is different from the proposition of law that Defendants suggest, i.e., ‘Defendants suggest that the case requires a plausible justification or excuse for the nondisclosure.’

86 article in the 1989 co-authored article was intended to be the same article as Kowalski 85. Even if the reference to an Kowalski 86 article was meant to refer to Kowalski 85, as alleged by Defendants, Defendants have failed to show by clear and convincing evidence that Kowalski 85 is material.

1. The Kowalski 86 article has not shown by clear and convincing evidence to be material

Contrary to any suggestion that Defendants may make that the Kowalski 86 article was a typographical error, Trevillyan (cited by the PTO) also cites to the Kowalski 86 article. (Brothers Dec. Ex. 39, at RCL 00120). Defendants have no admissible evidence of a typographical error. Dr. Kobayashi indicated that he did not recall who made the decision to include the Kowalski 86 article as a reference in the 1989 co-authored article, or why. (Brothers Dec. Ex. 23, Kobayashi 5/15/06 Tr. at 429-432). Dr. Kobayashi could not recall who provided the discussion in the article and the list of references, but believed it to be one of the other co-authors. *Id.*

Nor have Defendants come forward with clear and convincing evidence that the inventors knew of the Kobayashi 85 article. Dr. Kobayashi testified that he had no knowledge of Kowalski 85 when he was asked about it during his deposition. (*Id.*) There is not a showing by clear and convincing evidence that Dr. Kobayashi knew of the materiality of a Kowalski 85 article (or a Kowalski 86 article). When asked about the Kowalski 85 reference, Dr. Kobayashi indicated that he had no recollection of the reference. *Id.*

Thus, defendants have no evidence that the Kobayashi 86 reference is the same as the Kobayashi 85 article, or that the inventors knew about Kobayashi 85. This is a disputed factual issue that requires assumptions and inferences, and thus cannot be resolved on summary judgment. Defendants simply have failed to show that there is no genuine dispute of material fact that would entitle them to receive summary judgment that there was inequitable conduct by clear and convincing evidence.

2. The Kowalski 85 article is not shown by clear and convincing evidence to be material

Defendants' motion is based on Kowalski 85, not the Kowalski 86 article. The Kowalski 85 article is not what is disclosed in the 1989 co-authored article, and Defendants have no evidence that any

1 of the inventors knew of Kowalski 85.⁹ However, even if Defendants could prove that Dr. Kobayashi
 2 knew of Kowalski 85, their motion must fail as there is no evidence showing that Kowalski 85 by itself
 3 was material.

4 The crux of Defendants' motion is that the PTO has determined that Kowalski 85 by itself is
 5 material. But this misrepresents what the PTO has indicated. The PTO has not ordered a reexamination
 6 based on the Kowalski 85 article itself, but only in conjunction with the Kowalski 84 Thesis. The PTO
 7 has not indicated or provided any separate basis for reexamination of the '432 patent only in light of
 8 Kowalski 85. As the Office stated "It is agreed that the Kowal[]ski-85 reference (*including the inherent*
 9 *teachings of Kowalski-84*) would have been considered important by a reasonable Examiner in deciding
 10 whether or not at least claim 13 was patentable." (Brothers Dec. Ex. 85, Grant at 3, emphasis added).¹⁰

11 Defendants have provided no evidence showing that Kowalski 85 by itself is material. The
 12 reexamination grant indicates that Kowalski 85 only when taken in combination with other references is
 13 material. (Brothers Dec. Ex. 85, Grant at 2-3). As part of its rationale for reopening the '432 for
 14 examination, the PTO provides an element by element comparison of claim 13 to different "prior art"
 15 references.¹¹ However, Kowalski 85 does not exclusively provide the basis for reexamination of each of
 16 the claim elements. For example, the Grant at page 5 cites Kowalski 85 as teaching the claimed "storing
 17 in an expert system knowledge base a set of rules for selecting hardware cells to perform the actions and
 18 conditions", but relies on the Kowalski 84 thesis as teaching the rules and IF-THEN-ELSE formed rules.
 19 (Brothers Dec. Ex. 85, Grant at 5).

20 Furthermore, the analysis of another of the claim elements does not even rely on Kowalski 85
 21 but is based solely on a reference *other* than Kowalski 85. The Grant at page 7 cites Kowalski 84 as
 22 teaching the claimed "specifying for each described action and condition of the series one of said stored
 23 _____

24 ⁹ Although the brief repeatedly suggests, without evidence, that the KBSC system discussed in the co-
 25 authored 1989 is the commercial embodiment of the '432 patent, the absence of any supporting evidence
 26 requires the Court to disregard this assertion.

27 ¹⁰ There is no evidence that either of the inventors ever saw or knew the content of the Kowalski 84
 Thesis.

28 ¹¹ As indicated above, there is some question whether the Kowalski 84 Thesis constitutes prior art.

1 definitions which corresponds to the desired action or condition to be performed." There is no mention
 2 or reference to Kowalski 85 with regards to this claim element. (*Id.* at 7).

3 Additionally, the analysis of another claim element is based on the combination of the Kowalski
 4 85, the Kowalski 84 reference, along with a third reference. The Grant at pages 5-6 cites Kowalski 85 as
 5 teaching the claimed "storing in an expert system knowledge base a set of rules for selecting hardware
 6 cells to perform the actions and conditions", but refers to Dirkes master's thesis for the module binder.¹²
 7 "'The Module Binder: an algorithmic program that builds the modules specified by the DAA from
 8 components in the target technology....The module binder is the master's thesis project of E. Dirkes of
 9 Carnegie Mellon University.'" (Brothers Dec. Ex. 85, Grant at 5-6).¹³ Thus, the Grant did not rely
 10 solely on Kowalski 85 as the basis for granting the reexamination. As such, Defendants cannot rely on
 11 the Grant to show that Kowalski 85 by itself is material. Since there is no evidence, let alone clear and
 12 convincing evidence, that the Applicants were aware of the Kowalski 84 Thesis and Dirkes Thesis, the
 13 Court cannot grant summary judgment.

14 Additionally, the Grant is not a final decision on the merits of the examination of the '432 patent.
 15 As such, the Grant is not the final word from the PTO regarding the patentability of the '432 patent
 16 based on Kowalski 85 article. If and when an office action is mailed, the Patent Owner intends to
 17 present explanations as to why the '432 patent remains allowable over Kowalski 85 article and the
 18 Kowalski 84 Thesis (assuming the Kowalski 84 Thesis qualifies as prior art under § 102).

19 Defendants cannot rely on the 1989 co-authored article to provide support for the materiality of
 20 Kowalski 85. The 1989 co-authored article suggests to the contrary, that Kowalski 86 is *not* material
 21 nor believed by authors to be material. This article indicates that the reference is different for at least the
 22

23
 24 ¹² It is important to note that the reexamination Grant was a response to an *ex parte* application to which
 25 Ricoh was given no opportunity to respond prior to the Grant by the PTO. The Grant tracks almost
 26 verbatim the arguments set forth by requesting party (almost certainly Defendants). Thus, the PTO
 27 made little if any independent analysis in granting the petition for reexamination. In addition, the
 28 reexamination grant is not a final PTO action, and thus should not be relied upon by this Court as
 evidence that either the patent is invalid, or even that the cited authorities are material.

¹³ There has not been any allegation, let alone admissible evidence, that either of the inventors were
 aware of the Dirkes Thesis.

1 reasons cited, *i.e.*, “KBSC is clearly distinguished from the other logic synthesis systems in terms of its
 2 flowchart input form and rule-based approach to automatic data path and control path synthesis.”
 3 (Brothers Dec. Ex. 84, 1989 Co-authored Article at 389).¹⁴

4 While Defendants may say that the only difference indicated was that VDAA, along with the
 5 other references, is distinguished by its flowchart input form, the article also indicates that VDAA, along
 6 with the other references, is distinguished from KBSC by its rule based approach to automatic data path
 7 and control logic synthesis. The 1989 co-authored article does not indicate that VDAA uses architecture
 8 independent input, only that it uses ISPS input. Thus, the authors highlighted the novelty of that KBSC
 9 system and at least a couple of differences between that KBSC system and the cited systems. This
 10 shows that the authors of the 1989 co-authored article believed that the references, including VDAA,
 11 were different from that KBSC system. Thus, Defendants cannot rely on this article to support their
 12 allegation that Kowalski 85 is material. *In fact, the article demonstrates a good faith belief that the cited*
 13 *Kowalski article (Kowalski 86) was different from the KBSC system discussed in the 1989 article and*
 14 *hence not material.*

15 There is a factual dispute whether Kowalski 85 is more material than other references before the
 16 PTO. While Defendants experts fail to address the issue, Ricoh’s expert does in his report. Dr.
 17 Mitchell, the expert witness of Defendants, does not provide any additional helpful information
 18 regarding the materiality of Kowalski 85. Rather than compare Kowalski 85 to the other art before the
 19 PTO, Dr. Mitchell’s report reflects a comparison between Kowalski 85 and a single piece of art –
 20 Darringer. (Brothers Dec. Ex. 34, Mitchell Expert Report at 63). As such, Dr. Mitchell provides no
 21 evidence on which Defendants can rely to show that Kowalski 85 is material.

22 While Ricoh does not have to rebut the materiality of the Kowalski85, as Defendants have not
 23 shown by clear and convincing evidence that Kowalski 85 is material, Dr. Soderman has nevertheless
 24 explained that Kowalski 85 is not material. Dr. Soderman has opined that Kowalski 85 is not material
 25

26 ¹⁴ The article was written in a high level comparison and was not a detailed comparison that critically
 27 examined the other references comparable to the level of analysis of a patent infringement claim
 28 construction analysis. As such, the article was not an exhaustive comparison nor does it purport to be
 so.

1 when compared to all of the other references known to the PTO during prosecution. As reflected in his
2 expert report, Dr. Soderman has opined that the Kowalski 85 is not more material than other references
3 known to the PTO during prosecution. (Brothers Dec. Ex. 31, Soderman Rebuttal at 18-21, 52-53). As
4 such, Dr. Soderman concluded that Kowalski 85 would be cumulative of the other art that the PTO was
5 aware of during the prosecution of the '432 patent. Thus, Ricoh has strong evidence that Kowalski 85
6 does not anticipate the '432 and thus is not material.¹⁵

7 Furthermore, Dr. Soderman provided yet another reason why Kowalski 85 is not material as he
8 has provided reasons why Kowalski 85 by itself did not anticipate the '432 patent. (*Id.*) Dr. Soderman
9 also provided an explanation as to why Kowalski 85 in combination with other art cited by defendants
10 did not anticipate the '432 patent (*Id.*)

11 Additionally, Defendants have not shown any evidence that the inventors were aware of the
12 Kowalski 84 thesis. Nor have Defendants provided any evidence showing that inventors recognized any
13 materiality of the Kowalski 84 thesis. Defendants have not even alleged the inventors' knowledge of
14 the materiality of Kowalski 84. As such, Defendants fail to provide evidence that even the Kowalski 84
15 thesis, by itself, is material, and even if they did, disputed factual issues preclude granting the motion.

16 **B. Defendants have not satisfied their burden of showing that intent to deceive**

17 Defendants have failed to show by clear and convincing evidence that there was an intent to
18 deceive the patent office, either by direct or by indirect evidence. Defendants have failed to provide any
19 evidence that Dr. Kobayashi intended to withhold any reference, in particular the Kowalski 85 reference,
20 from the PTO. To the contrary, although he does not recall what documents he provided to his attorney,
21 Dr. Kobayashi testified that he did expend the "maximum effort" and his understanding is that he did
22 everything required. (Brothers Dec. Ex. 56, Kobayashi 5/25/04 Tr 296-97). Furthermore, Dr.
23 Kobayashi testified that, with respect to the Kowalski 85 reference, he had no recollection of the article.
24 (Brothers Dec. Ex. 23, Kobayashi 5/15/06 Tr. at 429-432). As such, there is no evidence that the
25 applicants intended to hide the Kowalski 85 reference from the PTO.

26
27 ¹⁵ This is discussed more fully in Ricoh's brief in opposition to Defendants' motion for summary
28 judgment re invalidity (No. 4) and is incorporated by reference.

1 Not only have Defendants failed to show the intent to deceive the PTO, the actions of the
2 Applicants suggest otherwise. This undermines any suggestion of an intent to deceive by Dr.
3 Kobayashi. During the prosecution of the '432 patent, the Applicants supplied the Trickey article to the
4 PTO, which discloses both DAA and VDAA. (Brothers Dec. Ex. 39, at RCL 188-98). The Kowalski 85
5 reference is listed as one of the references of the Trickey article. *Id.* As such, the Applicants did not
6 hide these references from the PTO. On these facts, Defendants have not, because they can not, show an
7 inference of the Applicants intent to deceive the PTO.

8 Additionally, with respect to the eight systems that are cited in the 1989 co-authored article, all
9 eight of these systems are included at some level of detail before the PTO. Even if the full reference is
10 not there, there is at least a discussion of the reference. Because there is at least a discussion or
11 reference to an article, this fact undercuts any suggestion of deceptive intent. Of the eight systems in the
12 co-authored paper, the applicants provided two of the referenced art systems to the PTO: reference 4,
13 "The CMU design Automation system – an example of automated data path design" and reference 8,
14 "An overview of Logic Synthesis Systems." Additionally, several of the other references were known to
15 the PTO as having been cited by the PTO: reference 1, "A new look at logic synthesis", reference 2,
16 "Methods used in an Automatic Logic Design Generator", reference 3, "Quality of Designs from an
17 Automatic Logic Design Generator", and reference 8, "An overview of Logic synthesis Systems." The
18 remaining references were listed in references before the PTO—both references 5 & 7 were listed in
19 Trevillyan. Therefore, contrary to the suggestion of shifting sands by Defendants, all of the eight
20 systems were before the PTO, which undercuts any intent to deceive.

21 As such, Defendants have failed to show by clear and convincing evidence the Applicants' intent
22 to deceive the U.S. Patent Office and therefore this disputed factual issue cannot be resolved on
23 summary judgment.

24 **V. DEFENDANTS UNSUPPORTED INNUENDO SHOULD BE DISREGARDED**

25 The Kowalski 85 reference is the only reference at issue in Defendants' motion. Although
26 Defendants insinuate regarding other alleged acts of inequitable conduct, they cite no supporting
27 evidence and such innuendo should be disregarded. For example, they imply there may be an on-sale
28

bar or prior publications by the inventor. Defendants elected to not present these the issues on the merits. As Defendants have not timely filed a motion on these issues, they have waived the opportunity to raise them, and no further response is required by Ricoh.

VI. CONCLUSION

Defendants have failed to satisfy their burden of showing by clear and convincing evidence that the Applicants acted inequitably during prosecution of the '432. Defendants have not and cannot show that Kowalski 85 is material, that the Applicants knew that it was a material reference and that the Applicants intentionally withheld the reference. At the very best, this motion involves issues that conflicts or lack of support, in the facts. Additionally, the question of materiality and intent is a question of fact, and as there are unresolved questions of fact, the facts should not be resolved by a motion for summary judgment. As such, the motion should be denied.

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